

REMARKS

Reconsideration of this application is requested. Claims 1-7, 10-16, 18-20, 47-60 and 62-64 are in the case.

I. CLAIM OBJECTIONS

Claims 5 and 51 are objected to for the reasons stated in paragraph 2 on page 2 of the Action. In response, those claims have been amended to make the revisions suggested by the Examiner.

II. THE 35 U.S.C. § 112, SECOND PARAGRAPH, REJECTION

Claims 1-7, 10-21 and 47-65 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for the reasons detailed on pages 2-4 of the Action. In response, and without conceding to the merit of these rejections, certain claims have been cancelled without prejudice and the remaining claims have been amended to deal with the points raised by the Examiner.

Claim 1 has been amended to recite that the reactor is a fluid bed reactor. Basis appears in original claim 21. Basis for "more than one inlet pipes" appears in original claim 17. Basis for the grid appears in Figure 1, and at page 7, line 22. No new matter is entered.

Withdrawal of the outstanding 35 U.S.C. § 112, second paragraph, rejection are now believed to be in order, such action is respectfully requested.

III. THE ANTICIPATION REJECTIONS

Claims 1-5, 10-13, 16, 17, 19-21, 47-51, 54-57, 60, 61 and 63-65 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent 3,839,017 to Schempp. Claims 1-5 and 47-51 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Japanese Patent 09-159145 to Iemori et al. Those rejections are respectfully traversed.

The present invention relates to a reactor which is a fluid bed reactor, comprising a grid and at least two molecular oxygen-containing inlet gas pipes surrounded over a substantial portion by an inert fluid. This inert fluid is essentially sealed from the reactor, in that, in the absence of leaks, breakages or other failures the inert fluid does not enter the reactor.

Schempp relates to an apparatus and method for converting impure ferrous metal to steel with a bottom blown converter vessel. Schempp discloses that the vessel (furnace) is provided with a plurality of nozzles which project oxygen-containing streams over the top of the molten metal in a bottom-blown vessel (e.g., col. 2, lines 58-60). The nozzles may be cooled with air or water (col. 4, lines 58-62). The nozzles do not extend into the vessel of Schempp but, in fact, are located with cavities (tuyeres) in the wall of the vessel.

In contrast, claim 1 of the present invention requires the inlet pipes to "extend in" to the reactor. This is also described on page 6, lines 7-8, which states that the inlets according to the present invention should be positioned not too close to the reactor walls. In addition, Schempp not disclose that the vessel has a grid.

Hence, claim 1 and its dependent claims are novel over (and not suggested by) Schempp. Similarly, claim 47 and its dependent claims are novel over (and not suggested by) Schempp. Withdrawal of the anticipation rejection based on Schempp is respectfully requested.

Iemori relates to a pipe for bubbling gas into a non-ferrous refining furnace. In particular, the pipe of Iemori may bubble inert gas, air or industrial use oxygen into the furnace. The pipe may be water cooled (paragraph [0005]). The furnace of Iemori has only one inlet pipe. In addition, Iemori does not disclose that the vessel has a grid.

Therefore, claim 1 and its dependent claims are novel over (and not suggested by) Iemori. Similarly, claim 47 and its dependent claims are novel over (and not suggested by) Iemori. Withdrawal of the anticipation rejection based on Iemori is respectfully requested.

IV. THE OBVIOUSNESS REJECTIONS

Claims 6 and 52 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Schempp and further in view of DE 3907464 to Muller. Claims 7 and 53 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Schempp and further in view of U.S. Patent 5,802,097 to Gensini et al. Claims 14, 15 and 58-59 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Schempp. Claims 18 and 62 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Schempp and further in view of U.S. Patent 5,801,265 to Wagner et al.

In response, all of the claims rejected on obviousness grounds are dependent, either directly or indirectly on claim 1 or claim 47, which are each clearly patentably

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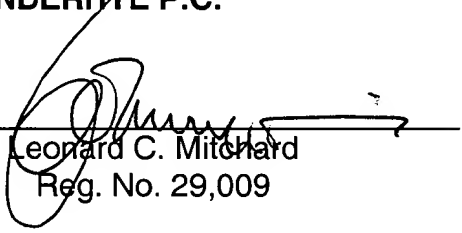
distinguished over Schempp for the above-discussed reasons. The deficiencies of Shcemp are not cured by the secondary art relied on by the Examiner in rejecting the various dependent claims. Withdrawal of all of the outstanding obviousness rejections is accordingly respectfully requested.

Allowance of the application is awaited.

Respectfully submitted,

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